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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,405	02/27/2004	Heon-Do Yun	041993-5364	4520
30827	7590	02/17/2006	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP			CHIEN, LUCY P	
1900 K STREET, NW			ART UNIT	
WASHINGTON, DC 20006			PAPER NUMBER	

2871

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,405

Applicant(s)

YUN ET AL.

Examiner

Lucy P. Chien

Art Unit

2871

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) 1 and 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claim 2-7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akahira (US 6471352) in view of Ueno (JP 09-166783).

Akahira discloses (figure 27C) providing a substrate having a plurality of unit panels formed thereon, loading the substrate onto a stage (Fig. 1, 52) and forming an alignment layer on the substrate to have a uniform thickness selectively dropping ink onto a first one of the unit panel regions by a dropping unit (Figure 1, items 55 and Figure 3, nozzles 108), having a plurality of heads each of the heads having a plurality of holes arranged along a row at regularly-spaced interval distance (Figure 27C).

Wherein the selective dropping of the alignment material onto the substrate comprises: performing a first positioning of the alignment material dropping unit at a first side of the stage (Abstract) performing a second positioning of the alignment material dropping unit at a second side of the stage along a first direction (abstract), dropping a first alignment material onto the substrate along the first direction during the performing of

the first and second positioning of the alignment material dropping unit; shifting the alignment material dropping unit by a distance h_1 along a second direction perpendicular to the first direction and dropping a second alignment material along the second direction (Column 13, 42-50).

Akahira does not disclose dropping alignment material.

Ueno discloses using the dropping unit panels for dropping alignment material.

(Abstract)

It would have been obvious to one of ordinary skilled in the art to modify Akahira's method of forming color film using a plurality of unit panels to include Ueno's method of forming an alignment film that uses a plurality of unit panels to prevent a decrease in the display performance by providing a uniform orienting film (Abstract).

Regarding Claim 3.

In addition to Akahira and Ueno ask disclosed above, Akahira discloses wherein the distance h_1 (called Y is $24 \mu\text{m}$ Column 20, rows 56-58) is smaller than the distance d_1 (which is 70.5 shown in Fig. 34).

Regarding Claim 4.

In addition to Akahira and Ueno ask disclosed above, Akahira discloses wherein the first and second positioning of the alignment material dropping unit includes moving the stage (Column 9, rows 1-7).

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Regarding Claim 5.

In addition to Akahira and Ueno ask disclosed above, Akahira discloses wherein the first and second positioning of the alignment material dropping unit includes moving the alignment material dropping unit (Column 19, rows 25-30 and 58-60).

Regarding Claim 6.

In addition to Akahira and Ueno ask disclosed above, Akahira discloses wherein performing a first positioning of the alignment material dropping unit includes moving the stage, and the performing a second positioning of the alignment material dropping unit includes moving the alignment material dropping unit (Fig. 20 Column 20, rows 63-67)

Regarding Claim 7.

In addition to Akahira and Ueno ask disclosed above, Akahira discloses wherein the performing a first positioning of the alignment material dropping unit includes moving the alignment material dropping unit, and the performing a second positioning of the alignment material dropping unit includes moving the stage (Fig. 20 Column 20, rows 63-67)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucy Chien
Examiner
Art Unit 2871
LC


ANDREW SCHECHTER
PRIMARY EXAMINER